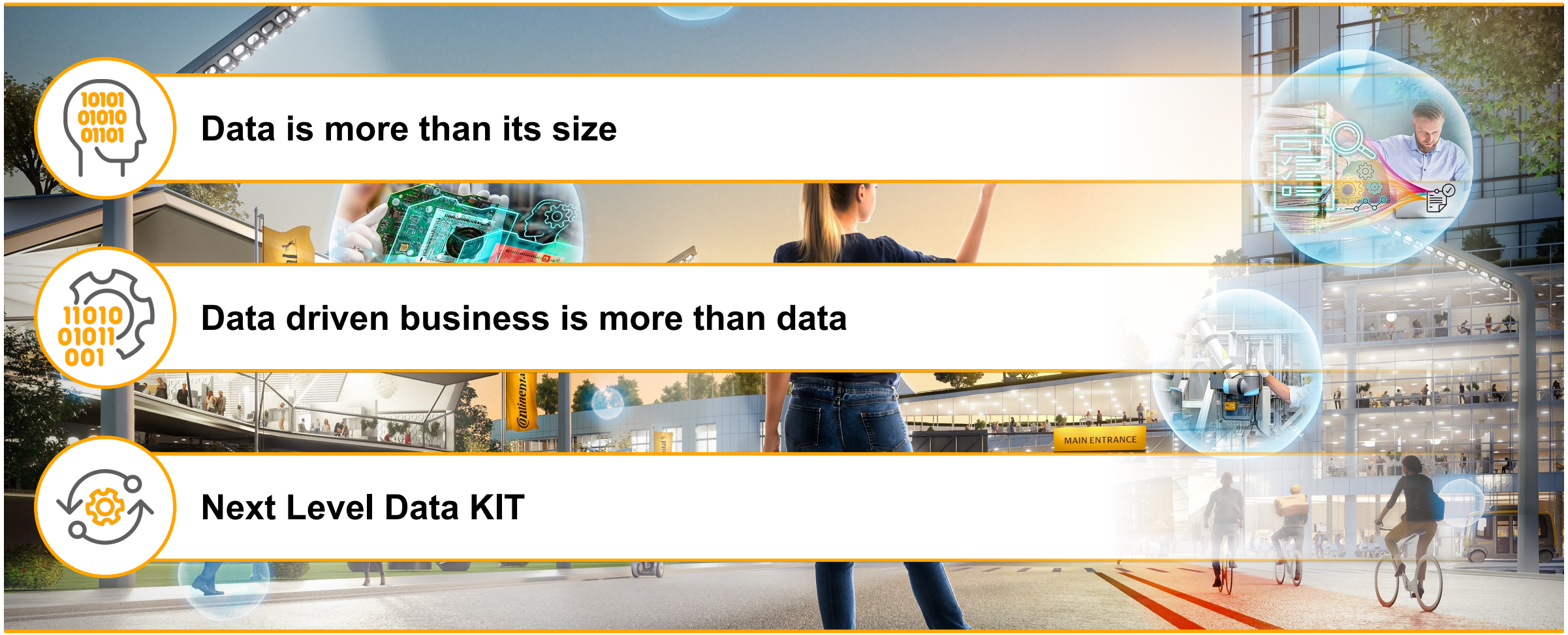
Next Level Data KIT

Data! – Why?

Dr. Stefan Voget | December 05, 2023

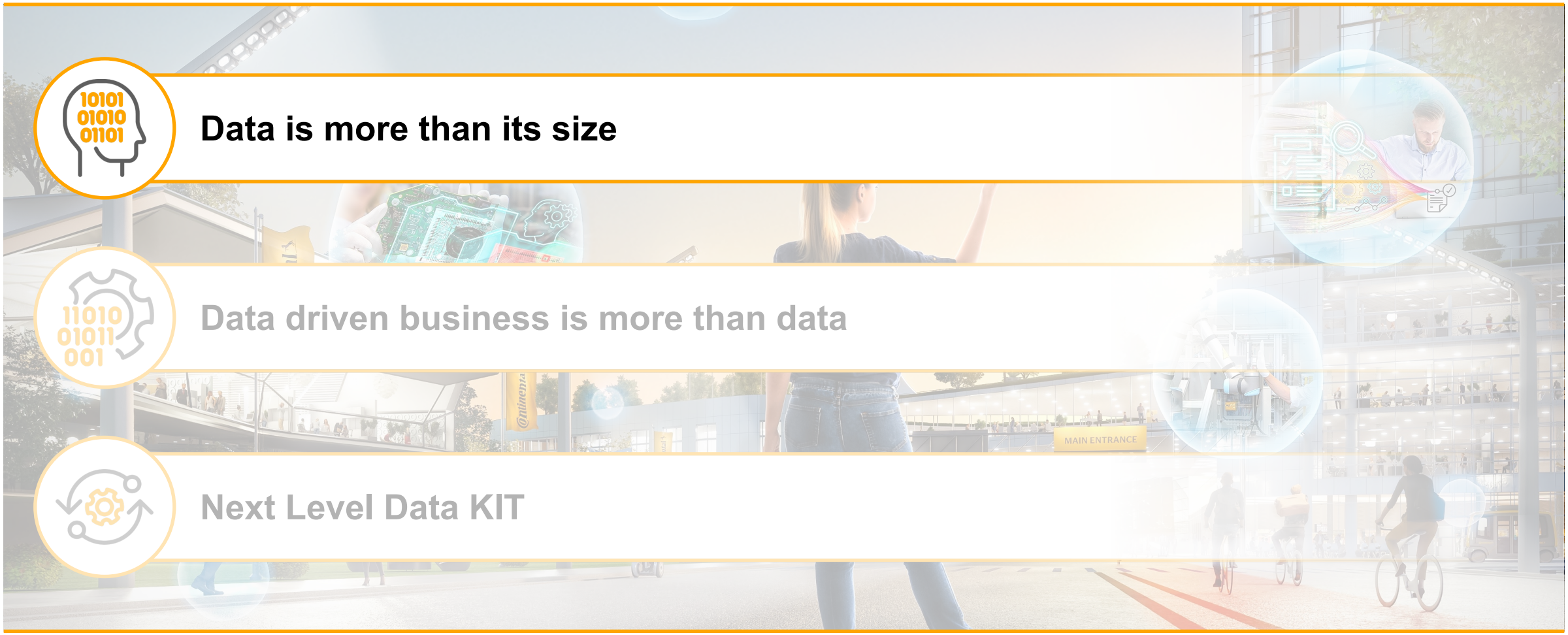
Next Level Data KIT

Content



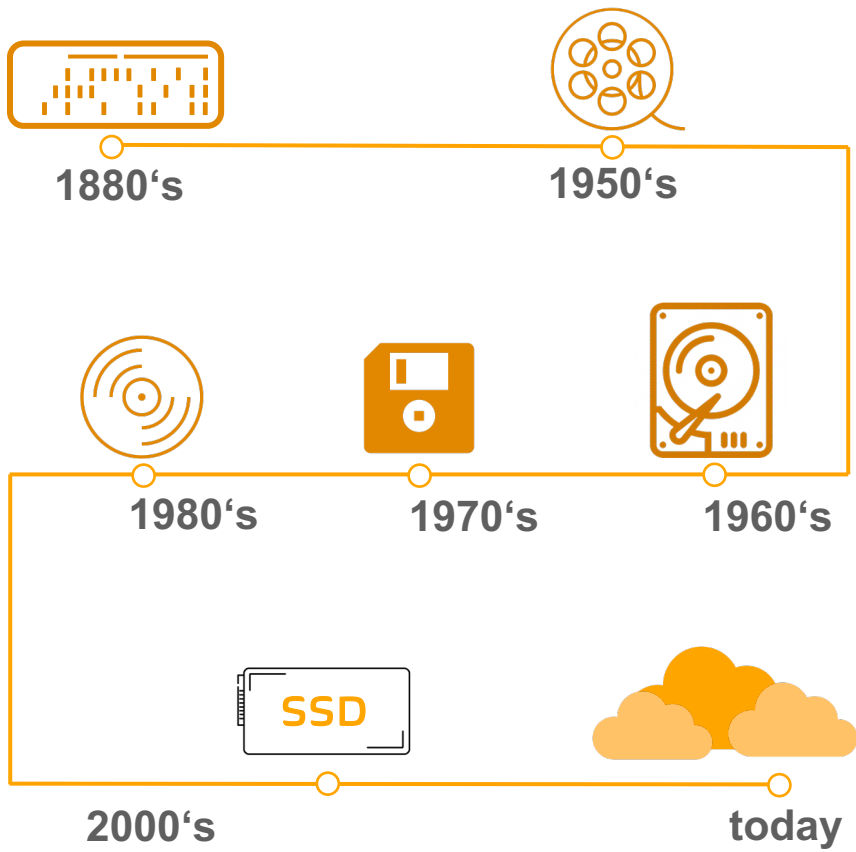
Data for AI

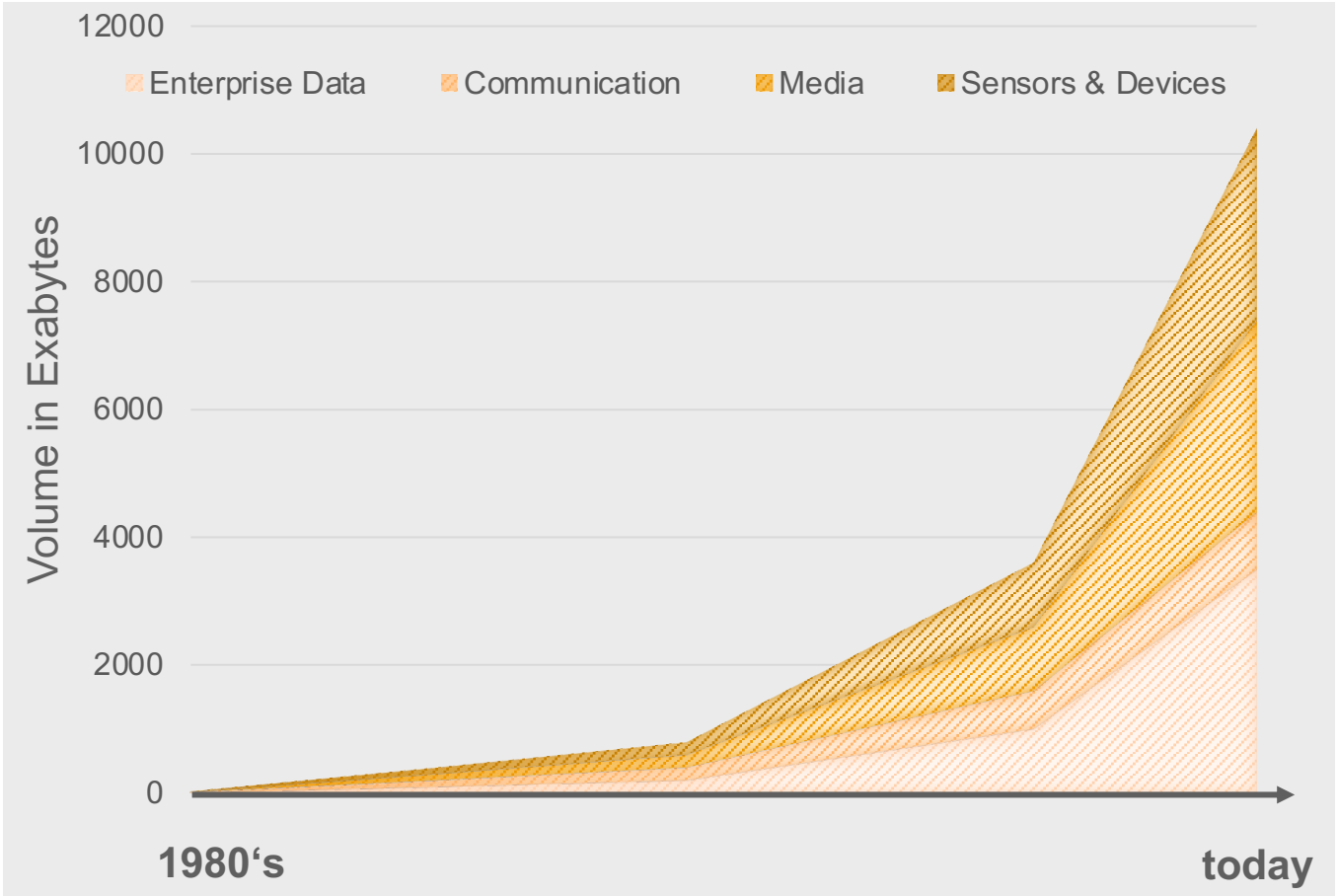
Content



Data is more than its size

From punch card to big data

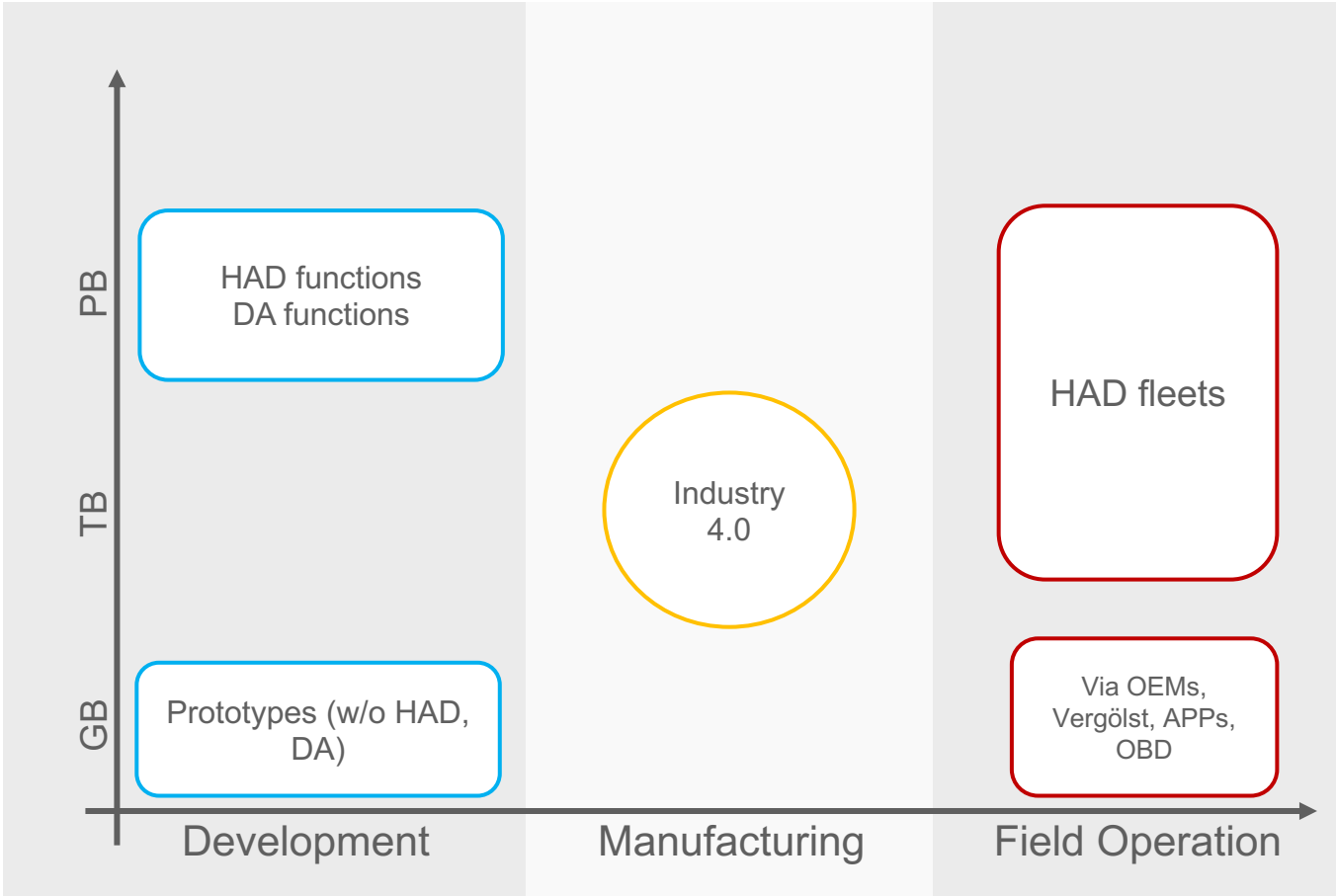




Data is more than its size

From boolean to complex data structures

- Simple boolean data for on/off signals
- Relational data structures
- Object oriented data structures
- Graph-based data structures



Data is more than its size

Everybody wants a piece of it!

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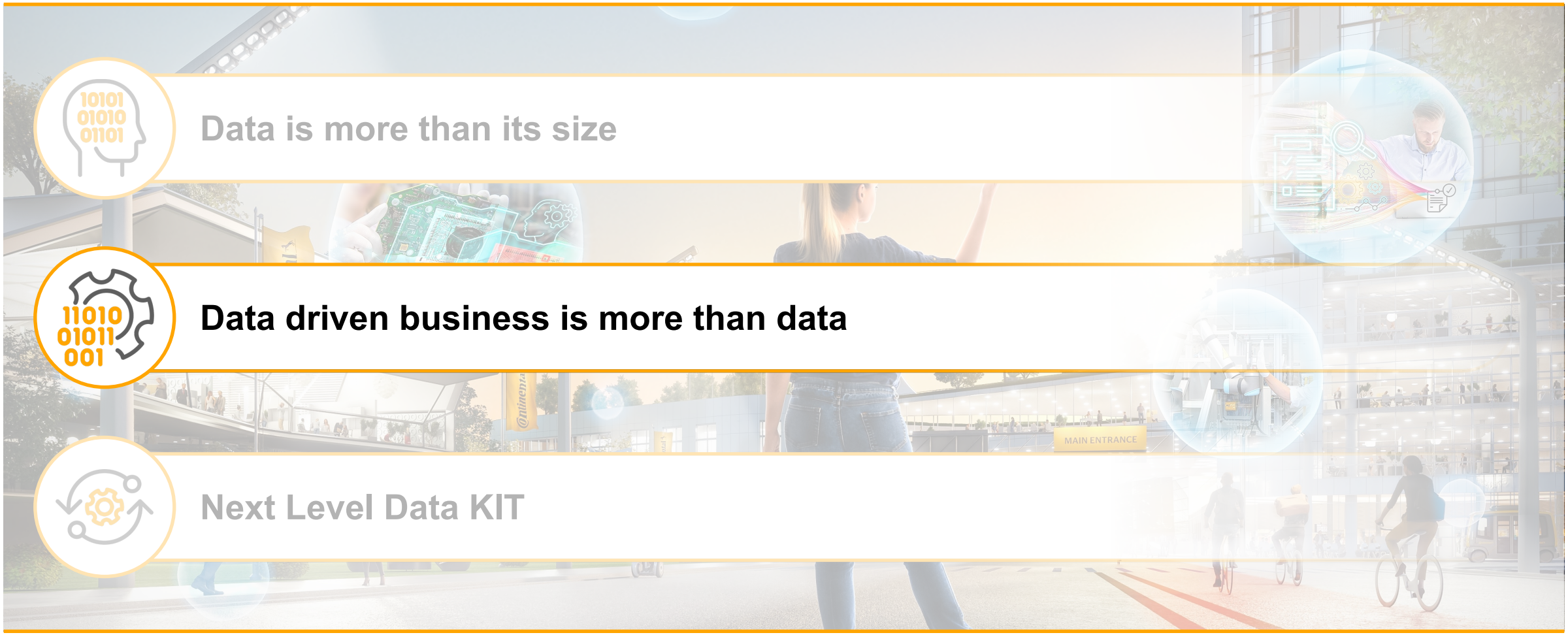
Content



Data is the Flour…

…but that doesn‘t make a cake

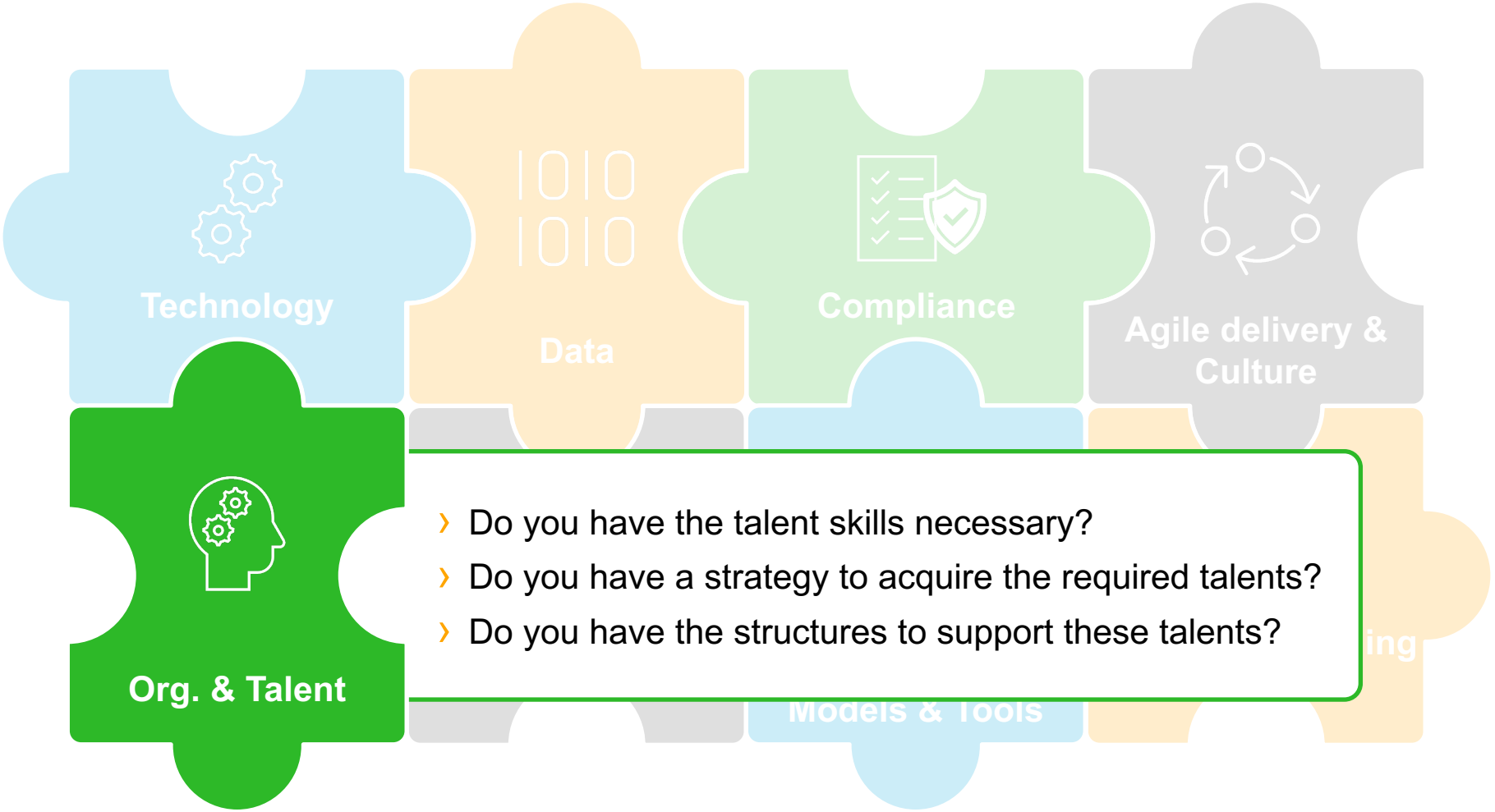
Data is the Flour…

…but that doesn‘t make a cake

- Do you have a long-term strategy for data?
- Is it linked to your business strategy?
- Is the management aligned and committed?

Data is the Flour…

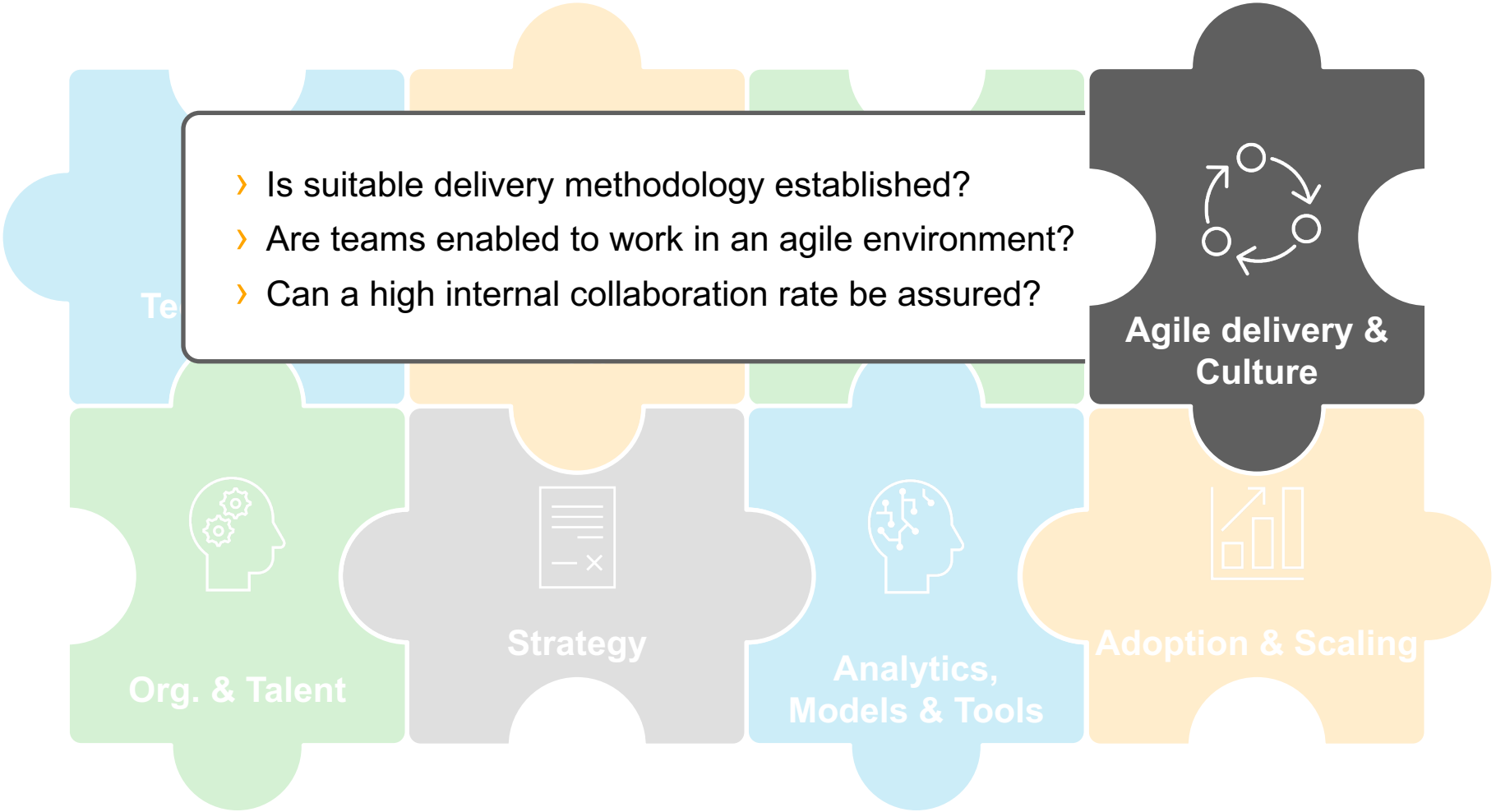
…but that doesn‘t make a cake



Public

Data is the Flour…

…but that doesn‘t make a cake



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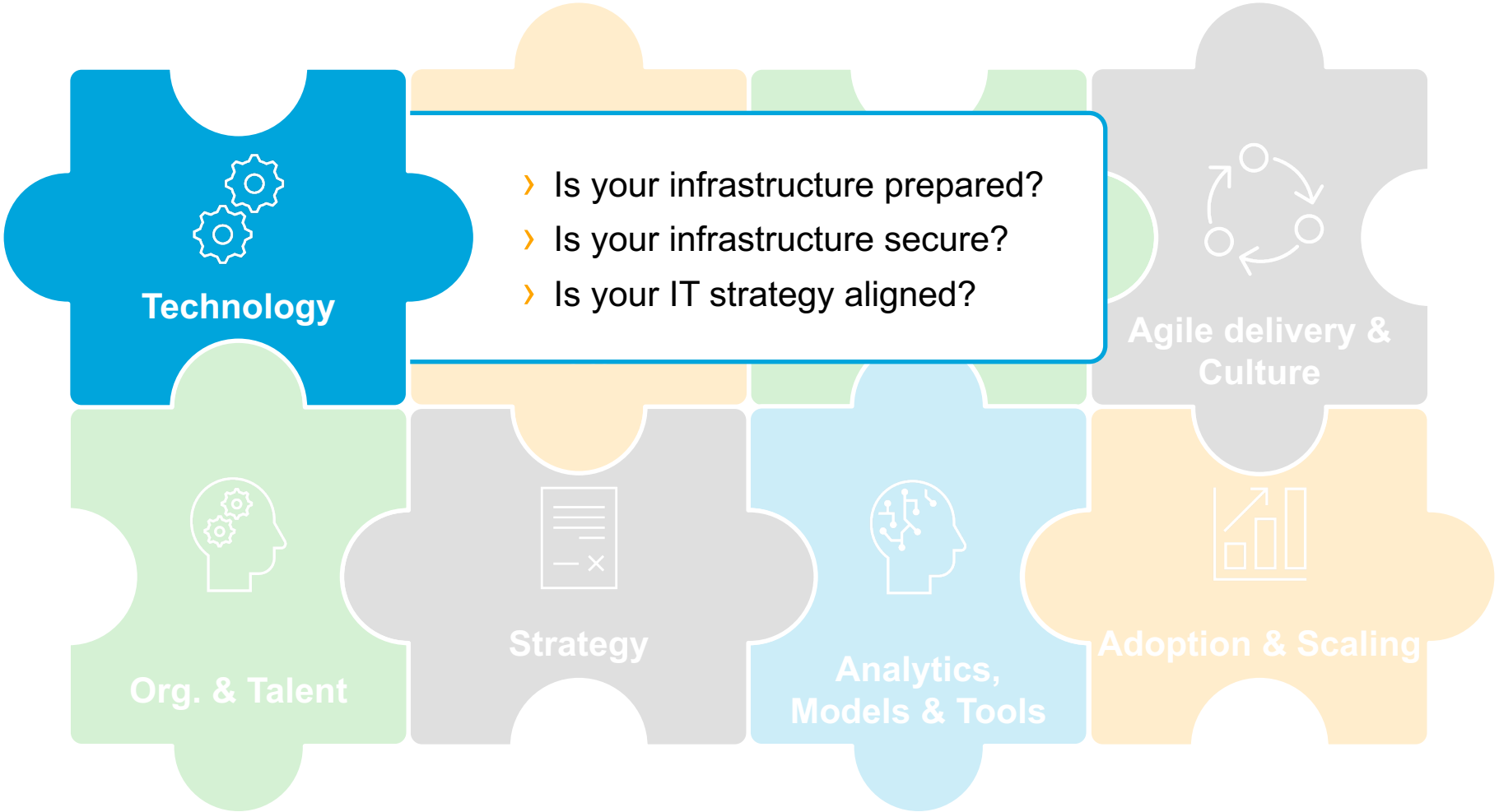

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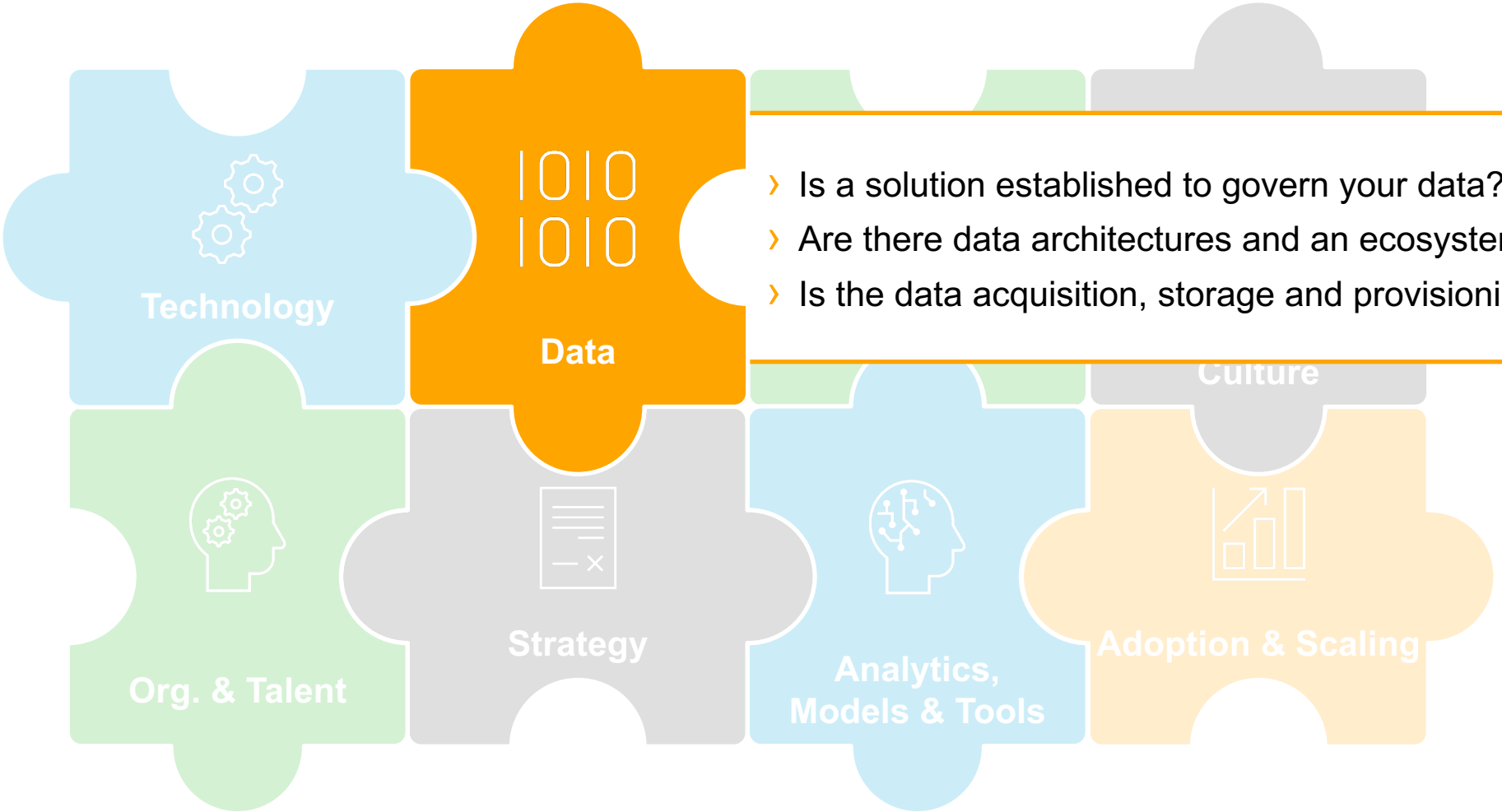

- Is a solution established to govern your data?
- Are there data architectures and an ecosystem available?
- Is the data acquisition, storage and provisioning enabled?

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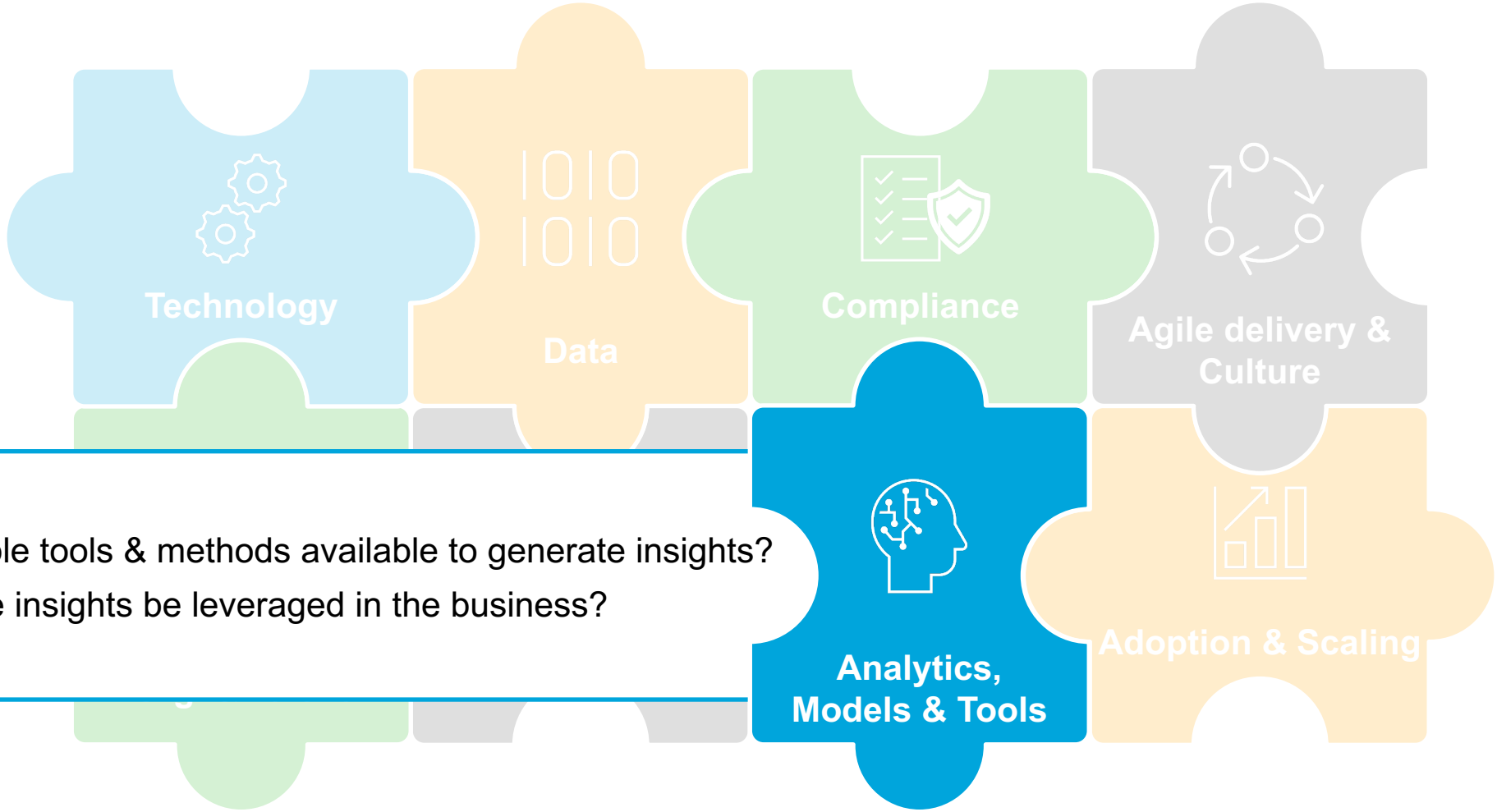


- Are suitable tools & methods available to generate insights?
- Can these insights be leveraged in the business?

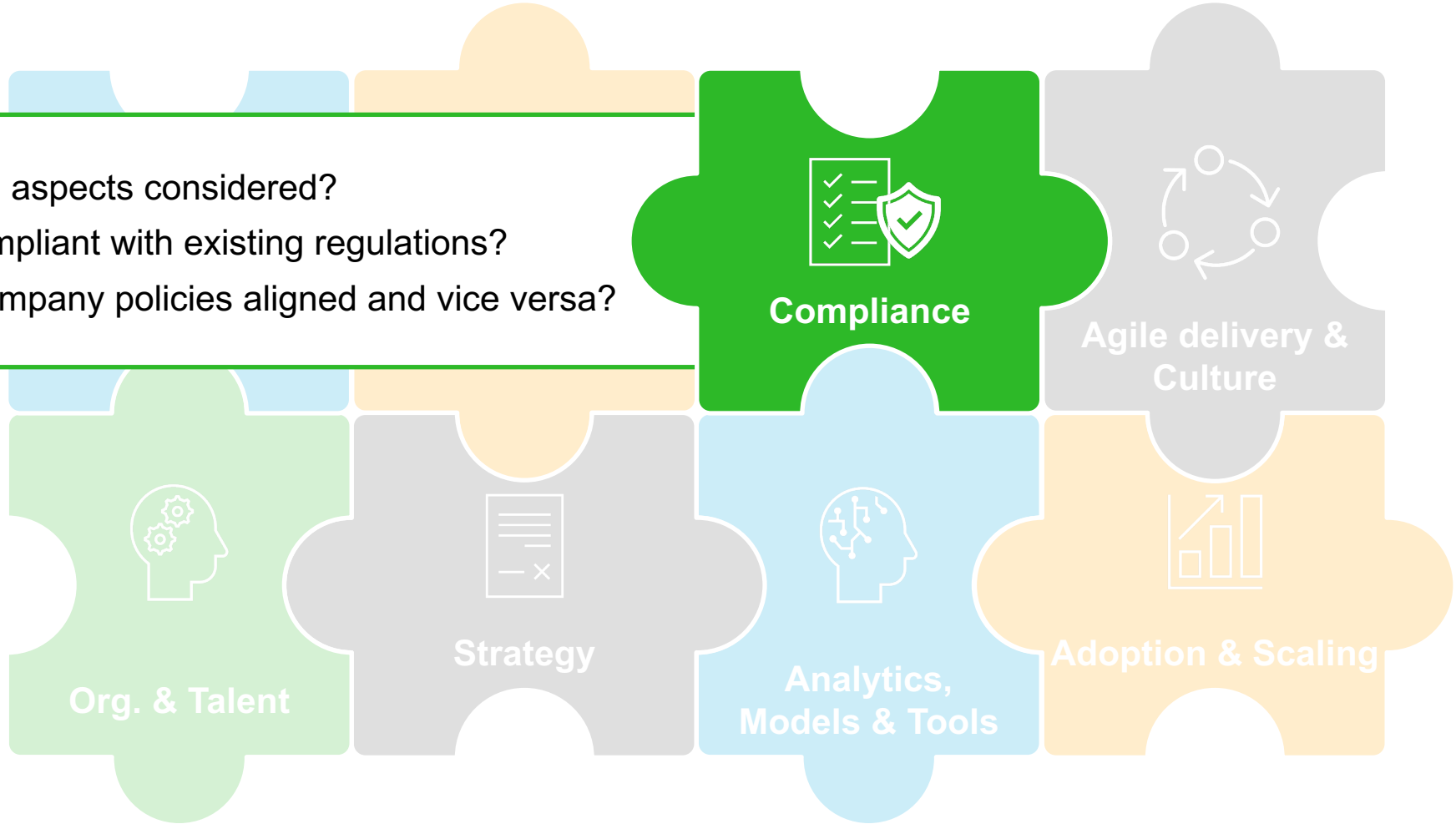
Data is the Flour…

…but that doesn‘t make a cake

Data is the Flour…

…but that doesn‘t make a cake

- Are all legal aspects considered?
- Are you compliant with existing regulations?
- Are your company policies aligned and vice versa?



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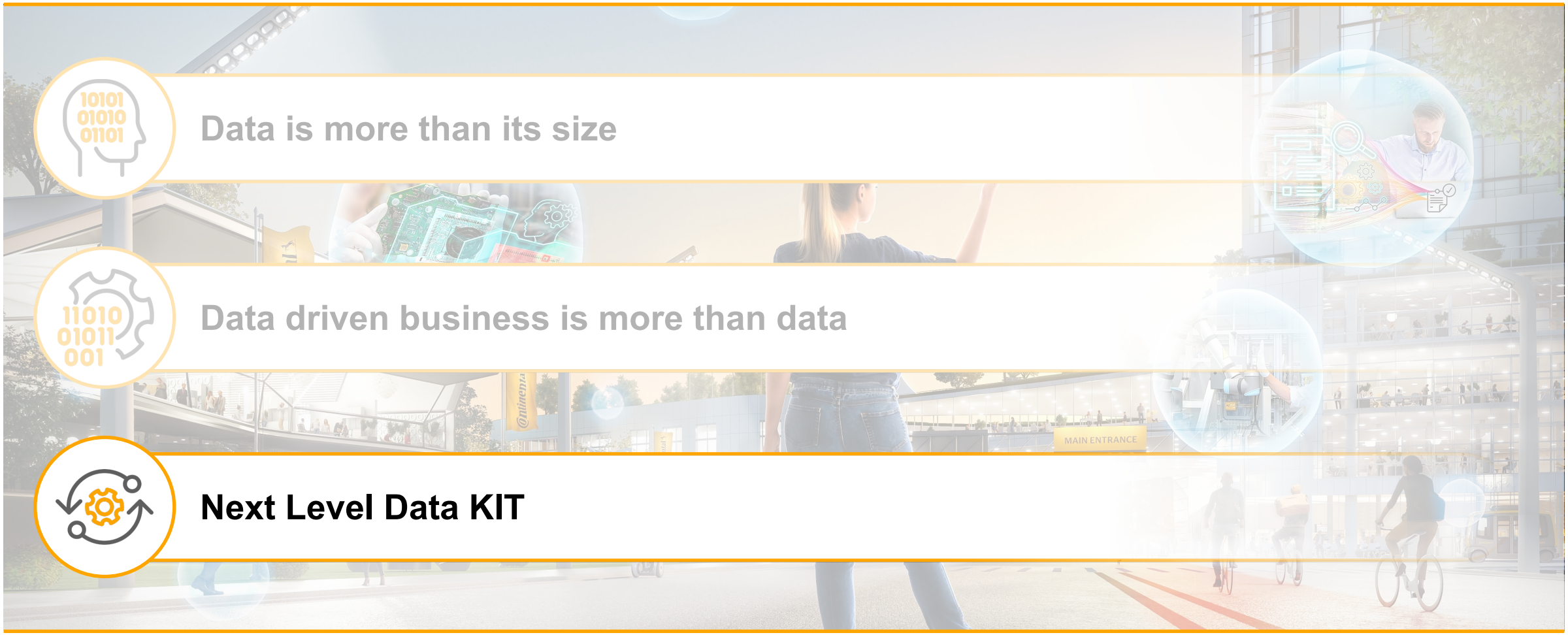

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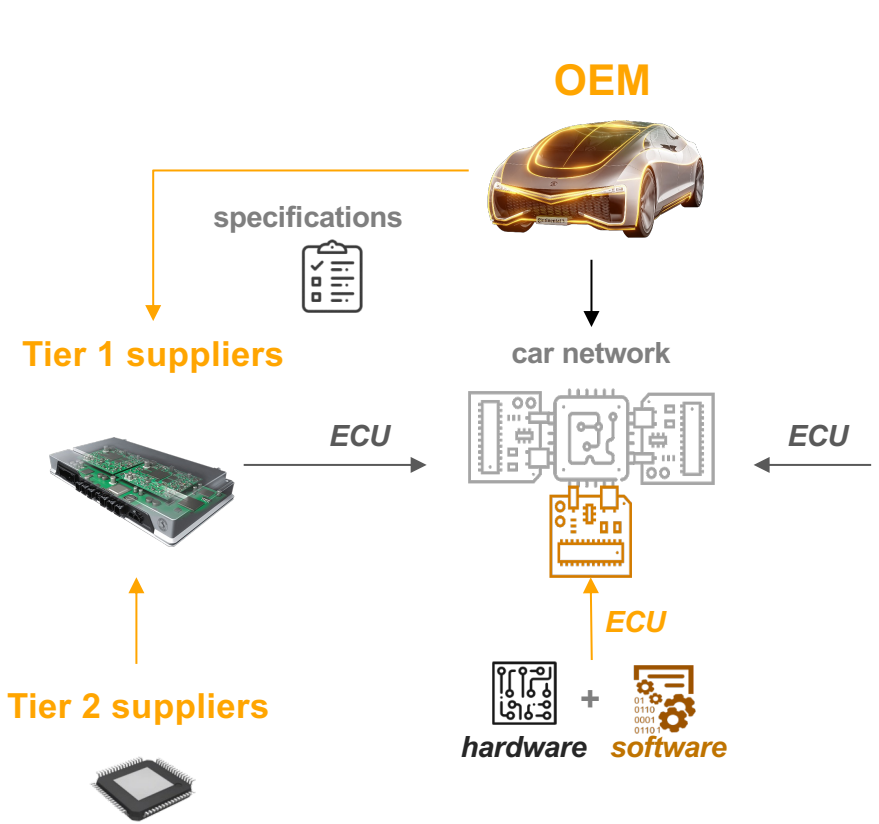
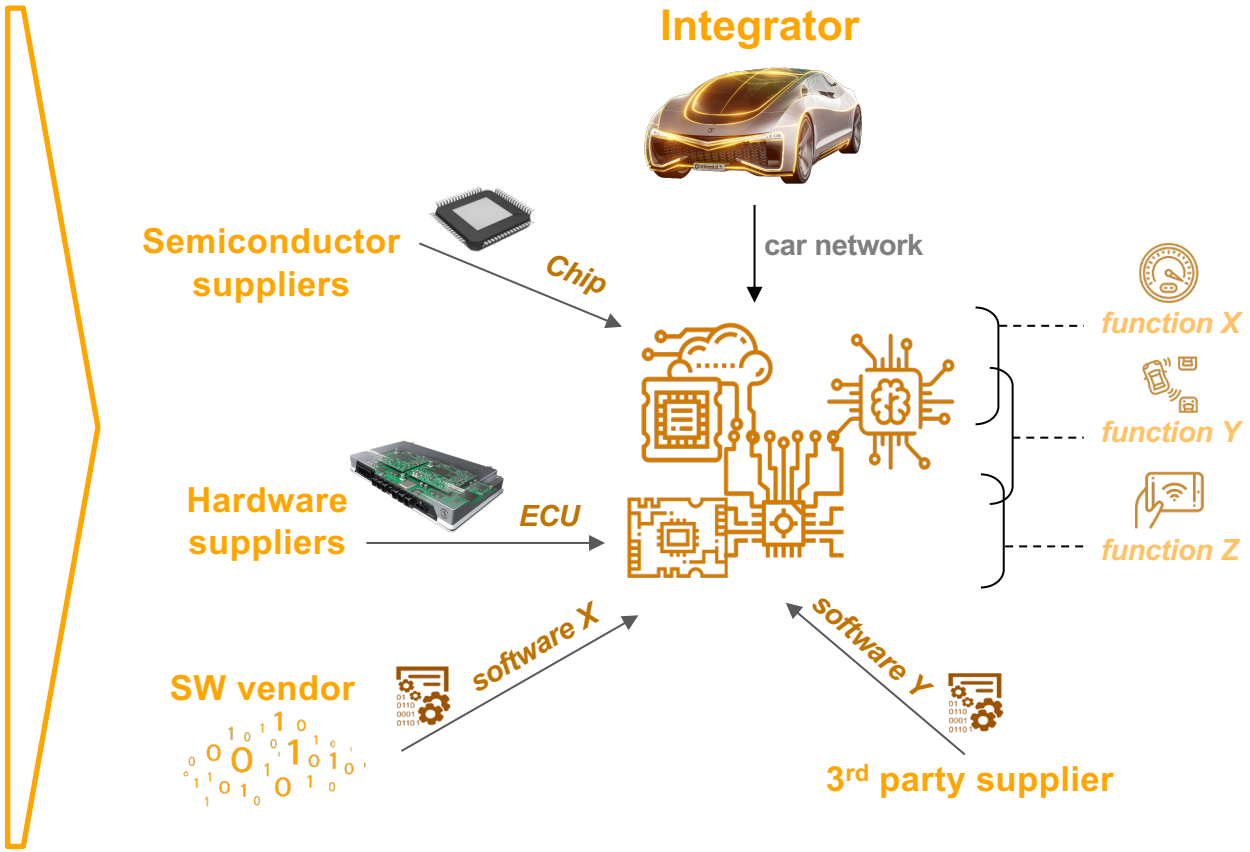
Traditional Collaboration Workflows become outdated





"Traditional Development"

"Collaborative, decentralized Development"

Cloud
Enrich Data
Train ML Model
Improve Data
V&V
Pre-process Data
Deploy ML Model
Collect Data
Integrate ML Model
Monitor ML Model
Integrate System
Operate System
V&V System
Antenna
ZCUs
HPCs
Display
Actuators
Sensors
From the road to the cloud
From virtual to real

Public

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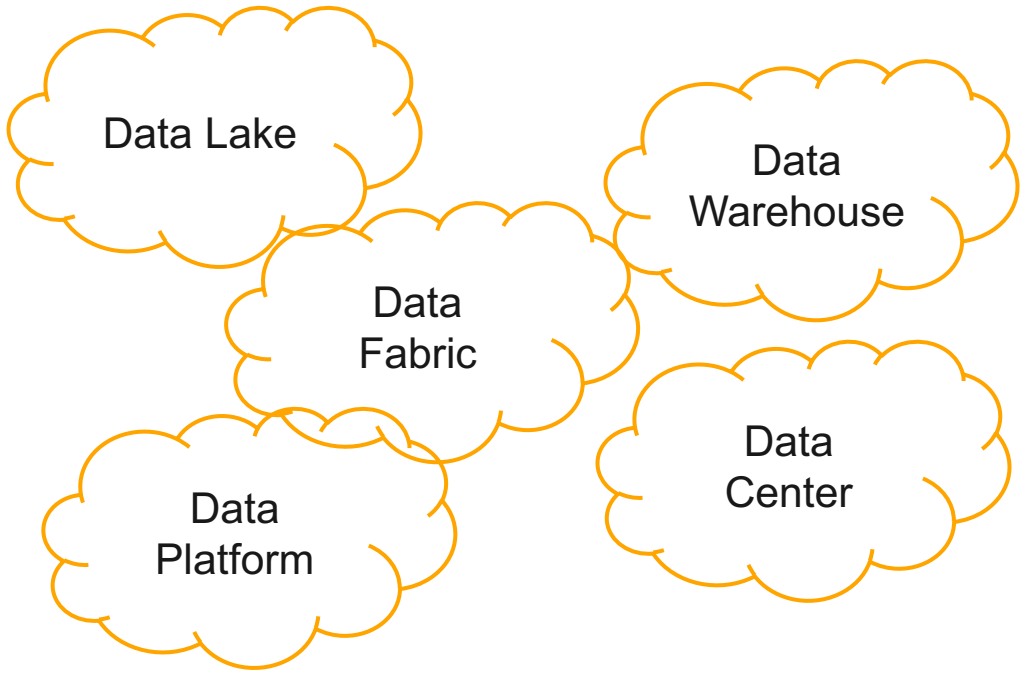
Traditional Collaboration Workflows become outdated



“Traditional Development”

Data Mesh

“Our aspiration to augment and improve every aspect of business and life with data, demands a paradigm shift in how we manage data at scale.”)*

Domain Ownership Decentralized Responsibility	Data as a Product Product Thinking for Data	Self-service Data Platform	Federated Governance
Decentralization and distribution of responsibility to people who are closest to the data	Fulfilment of defined quality criteria of data like: ✓ Topicality ✓ Access ✓ Completeness ✓ Automated tests	Self-service for ✓ Storage ✓ Discoverability ✓ Access control ✓ In Product Search ✓ Monitoring	Company-wide requirements for ✓ Processing ✓ Provision ✓ Legality ✓ Security of data products

“Collaborative, decentralized Development”

*) Zhamak Dehgahani: Data Mesh Principles and Logical Architecture

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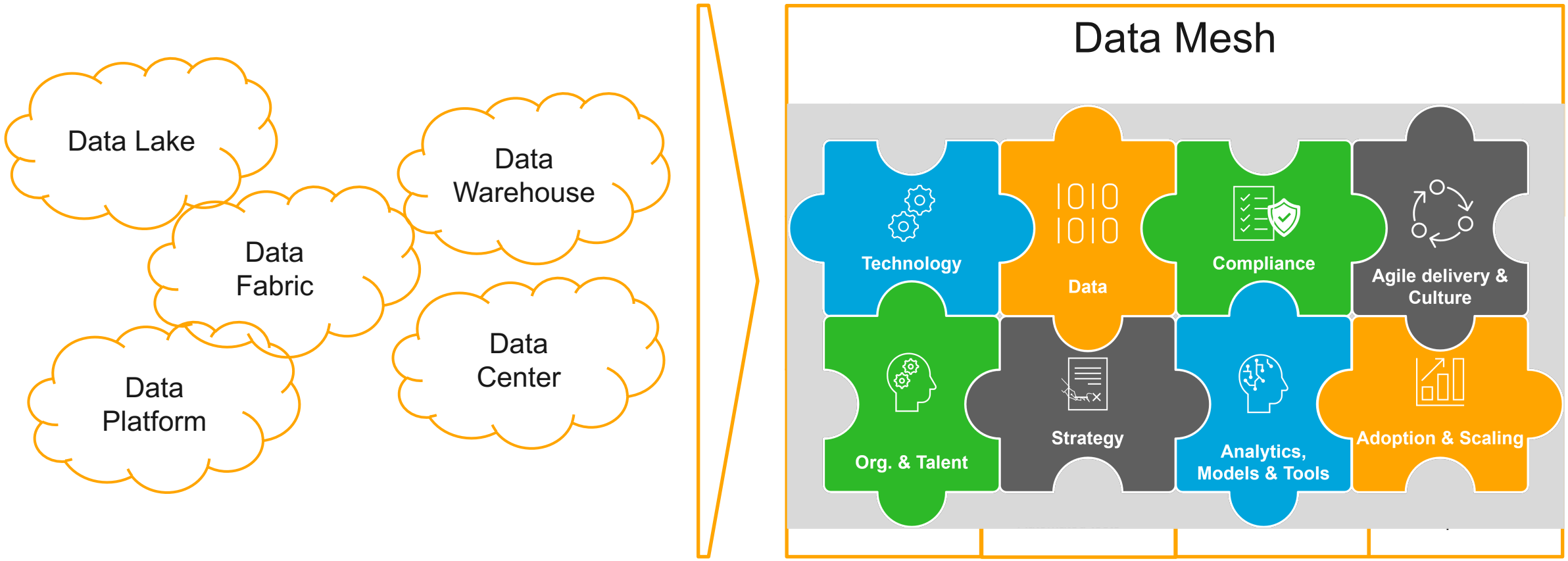

“Traditional Development”

“Collaborative, decentralized Development”

*) Zhamak Dehgahani: Data Mesh Principles and Logical Architecture

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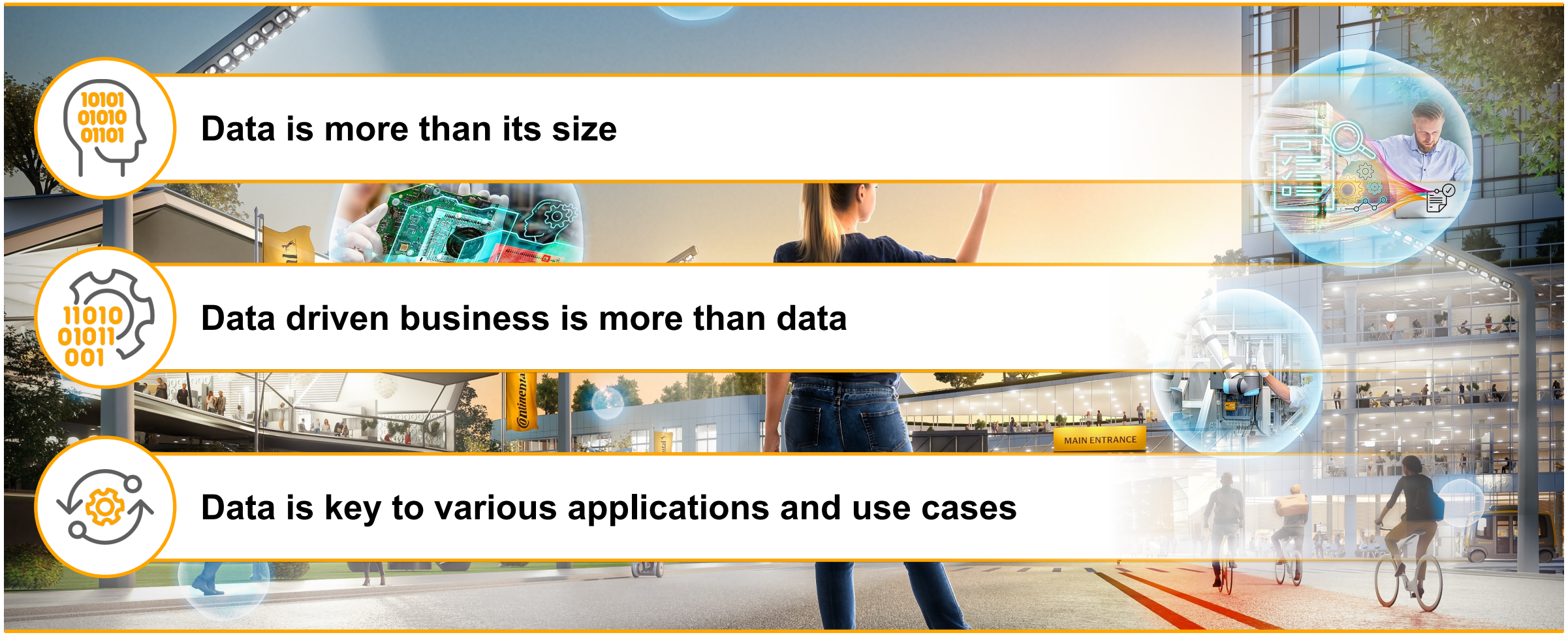
Key Take-Aways



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